

4th Grade Math Teacher Resources

Unit 1

Place Value

- Lesson ideas and activities to teach place value understanding. PDF of this activity is located on shared drive. File Name: NC NBT Build.pdf
- PARCC **prototype** online question involving ordering, rounding, and critiquing/justifying the reasoning of others.
http://www.ccsstoolbox.com/parcc/PARCCPrototype_main.html
- 4.NBT.A.1 – *LearnZillion* videos on teaching how each place value represents ten times the place to its right. Videos could be used to give the teacher ideas on how to model lesson using multiplication or division.
<http://learnzillion.com/lessons/16-understand-place-value-multiplying-by-a-power-of-10> and <http://learnzillion.com/lessons/19-understand-place-value-dividing-by-a-power-of-10>
- 4.NBT.A.2 – *LearnZillion* videos on teaching how to use pictures to depict place value and comparing numbers. <http://learnzillion.com/lessons/12-find-place-value-using-pictures> and <http://learnzillion.com/lessons/15-compare-numbers-using-place-values>
- 4.NBT.A.3 – *LearnZillion* video on teaching rounding of numbers using real world situations. <http://learnzillion.com/lessons/527-round-in-reallife-situations>
- *StudyJam* video on Place Value shown to the class as a short clip along with teacher modeling.
<http://studyjams.scholastic.com/studyjams/jams/math/numbers/place-value.htm>

Addition and Subtraction

- Subtraction Game for student fluency practice.
<http://www.xpmath.com/forums/arcade.php?do=play&gameid=41#.UaT—hw0Q70>
- *StudyJam* Step-by-Step Activity and song on Addition Properties.
<http://studyjams.scholastic.com/studyjams/jams/math/addition-subtraction/prop-of-addition.htm>

Word Problems and Equations

- 4.OA.A.3 – *StudyJam* video on creating equations from real world word problems. Also focuses on looking at key words to know which operation to use to solve.
<http://studyjams.scholastic.com/studyjams/jams/math/problem-solving/pscreating-equations.htm>
- 4.OA.A.3 – Several *LearnZillion* videos on solving a multi-step word problem using the drawing a model strategy, t-charts, number lines, etc.
<http://learnzillion.com/lessons/1724-solve-multistep-word-problems-by-using-model-drawing>

Unit 2 Multiplication and Division

- Lesson ideas and activities to teach multi-step multiplication problems. PDF of this activity is located on shared drive. File Name: NC OA Multi.pdf
- The Baker Task from *2012 Noyce Foundation* PDF of this activity is located on shared drive. File Name: The Baker Task
- PARCC **prototype** online Word Problem Example
http://www.ccsstoolbox.com/parcc/PARCCPrototype_main.html
- Online manipulative on *Illuminations* that a teacher can use to model Balance Equations. <http://illuminations.nctm.org/ActivityDetail.aspx?ID=26>
- PARCC **prototype** online question involving multiplication.
http://www.ccsstoolbox.com/parcc/PARCCPrototype_main.html
- *StudyJam* Step-by-Step instruction on the Distributive Property that a student could use independently.
<http://studyjams.scholastic.com/studyjams/jams/math/multiplication-division/distrib-property.htm>
- 4.OA.A.3 – Several *LearnZillion* videos on solving a multi-step word problem using the drawing a model strategy, t-charts, number lines, etc.
<http://learnzillion.com/lessons/1724-solve-multistep-word-problems-by-using-model-drawing>

Unit 3 Measurement and Data

- *Khan Academy* Exercise-this exercise will allow students to practice area and perimeter online – www.khanacademy.org/math/geometry/basic-geometry/perimeter-area-basics/e/area_1
- 4.MD.B.4 - Unit Fractions on a Line Plot Task
<http://www.mrmaffesoli.com/Printables/4MD4/4MD4-MWL.pdf>

Unit 4 Fractions and Decimals

- **TNCore Math Tasks** (CRA Tasks with assessing and advancing questions and misconceptions)
http://www.tncore.org/math/instructional_taskstdoe/grade_4.aspx
- Fraction Bars: This site has lesson and worksheets to assist the teacher in learning and modeling the CCSS.
<http://fractionbars.com/CommonCore/Grade4.html>
- Online manipulative on *Illuminations* that a teacher can use to model equivalent fractions or a student could use to practice.
<http://illuminations.nctm.org/ActivityDetail.aspx?ID=80>
- *Illustrative Mathematics* has videos to increase teacher understanding of fraction focus standards.
http://www.illustrativemathematics.org/pages/fractions_progression
- “Give ‘Em Chocolate” (page 32-35) is a lesson and activity ideas for teaching decomposing fractions. PDF of this activity is located on shared drive- File name: NC NF Choc.pdf

- “Multiple Representations” (page 38-42) in this document gives lesson ideas and activities to teach multiple representations of fractions and decimals. PDF of this activity is located on shared drive. File name: NC NF Mult Rep.pdf
- Picking Fraction Task from *Noyce Foundation*
PDF of this activity is located on shared drive. File Name: Picking Fractions
- LearnZillion has tons of videos on fractions that you can use to assist you in your planning or in the modeling of CCSS.
[http://learnzillion.com/lessons?utf8=%E2%9C%93&filters\[subject\]=math&query=4.NF](http://learnzillion.com/lessons?utf8=%E2%9C%93&filters[subject]=math&query=4.NF)
- 4.NF.A – Running Laps Task on *Illustrative Mathematics*
<http://www.illustrativemathematics.org/illustrations/971>
- 4.NF.A.2 – Listing fractions in increasing size task on *Illustrative Mathematics*.
<http://www.illustrativemathematics.org/illustrations/811>
- 4.NF.A.2 Using Benchmarks to Compare Fractions Task on *Illustrative Mathematics*.
<http://www.illustrativemathematics.org/illustrations/812>
- 4.NF.B – Comparing two different pizzas task on *Illustrative Mathematics*
http://s3.amazonaws.com/illustrativemathematics/illustration_pdfs/000/000/819/original/illustrative_mathematics_819.pdf?1344523079
- 4.NF.B.3.a – Comparing Sums of Unit Fractions task on *Illustrative Mathematics*
<http://www.illustrativemathematics.org/illustrations/831>
- 4.NF.B.3.b – Making 22 Seventeenths in Different Ways Task from *Illustrative Mathematics*
<http://www.illustrativemathematics.org/illustrations/837>
- 4.NF.B.3c – Building Plastic Blocks task *Illustrative Mathematics*
<http://www.illustrativemathematics.org/illustrations/856>
- 4.NF.B.4 – Math Meeting YouTube video on multiplying fractions by a whole number. <https://www.youtube.com/watch?v=RbAaKAR5ErM>
- 4.NF.B.4 – Sugar in 6 cans of soda task on *Illustrative Mathematics* involves multiplying fraction by whole number.
<http://www.illustrativemathematics.org/illustrations/857>
- 4.OA.A.3 Carnival Tickets Task on *Illustrative Mathematics* involves decimals.
<http://www.illustrativemathematics.org/illustrations/1289>

Unit 5 Geometry

- Teaching Channel video with lesson idea for real world connection of area and perimeter. “Table for 22”. A 6th grade lesson, but could be easily adapted to 4th grade. <https://www.teachingchannel.org/videos/real-world-geometry-lesson>
- PARCC **prototype** online perimeter/area question.
http://www.ccsstoolbox.com/parcc/PARCCPrototype_main.html
- “Gardens of Delight Task” from *The Concord Consortium* involving area and perimeter. <http://balancedassessments.concord.org/docs/e019.pdf>
- 4.G.A.3- Symmetry Task on *Illustrative Mathematics*
<http://www.illustrativemathematics.org/illustrations/1060>

Resources:

- **Learnzillion**
Teachers can create a free account on Learn Zillion to search and view videos based on common core standards. Videos could be used to increase teacher understanding of the CCSS. <http://learnzillion.com>
- **K-5 Math Teaching Resources**
This site provides ideas, literature connections, and links to activities by CCSS. <http://www.k-5mathteachingresources.com/4th-grade-number-activities.html>
- If your school has purchased a license for **StudyIsland or Compass**, there are various resources available through those programs to assist you in teaching the standards.
- **Unpacking the Standards** by North Carolina Department of Instruction is a pdf file which shows example problems of each common core standard. <http://www.ncpublicschools.org/docs/acre/standards/common-core-tools/unpacking/math/4th.pdf>
- **Understanding number lines** in common core information can be found at North Carolina Department of Public Instruction. <http://www.ncpublicschools.org/docs/acre/standards/common-core-tools/organizers/math/number-lines.pdf>

Please send questions, suggestions, and/or corrections to
Karl.Bittinger@cmcss.net
and
Jamie.James@cmcss.net